

# Pavlo Bondarenko

## Software Engineer

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Software Engineer specializing in AI and machine learning with over 5 years of experience developing scalable cloud infrastructures on Azure and Kubernetes. Expert in optimizing API performance and implementing low-latency distributed systems, leading to a 22% reduction in operational costs. Passionate about mentoring junior developers and delivering innovative AI-driven software solutions that enhance system efficiency and user experience.

### Skills

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**Programming Languages:** Python, JavaScript (ES6+), Typescript, SQL, NoSQL, C++

**Cloud Platforms:** Azure (Cloud Infrastructure, App Services, Functions, Kubernetes)

**Specialties:** AI/ML, LLM (Large Language Models), Computer Vision, RAG

**Tools and Frameworks:** React Native, Next.js, OpenCV, TensorFlow, Terraform, Jenkins

### Certifications

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**Microsoft Certified: Azure AI Engineer Associate (AI-102)**

- Designing and implementing AI solutions using Azure AI services, Azure Cognitive Search, and Azure OpenAI.

**Microsoft Certified: Azure Data Scientist Associate (DP-100)**

- Skilled in model training and deployment with Python and Azure Machine Learning.

### Experience

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**Software Engineer, QIT Software – Plano, TX**

Jan 2021 – Mar 2024

- Developed and deployed a machine learning-powered document scanning system using Python, OpenCV, and Azure AI, which reduced manual data entry by 80%, significantly improving data processing speed and accuracy.
- Optimized cloud infrastructure by migrating legacy systems to Azure App Services and Functions. I automated infrastructure management using Terraform and Jenkins for seamless CI/CD integration, resulting in a reduction of system downtime by 11% and operational costs by 22%.
- Engineered backend optimization efforts by reworking data pipelines and introducing distributed data processing using Azure Kubernetes Service (AKS). This enhanced data throughput by 30%, enabling faster and more efficient data analysis.
- Implemented Azure Active Directory to centralize identity management for over 1,000 users, automating workflows and strengthening security compliance, which streamlined user access management and improved operational efficiency.

**Full Stack Developer, 123Remodeling – Chicago, IL**

Sep 2016 – May 2018

- Redesigned web platforms with mobile-first designs using React Native and Next.js, boosting web traffic by 29% and significantly improving user engagement through faster load times and improved UX.
- Collaborated cross-functionally with designers and marketers to roll out a fully responsive and visually consistent brand experience across over 29 web applications, leading to a 36% increase in brand visibility.
- Improved scalability by implementing automated CI/CD pipelines using Jenkins and Git, reducing deployment time by 20% and enhancing code quality with Selenium for automated testing, which improved software reliability and deployment efficiency.

## Projects

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### **ATL AI Hackathon with Google**

[project link](#)

- Developed an Amber Alert system that integrates Tesla's API to broadcast vehicle and suspect details, including license plates, using Python and machine learning models for real-time object detection. Enhanced public safety by reducing suspect identification times, using TensorFlow to process real-time data and feed alerts to Tesla's in-car systems.

### **HackUTA 2024 - (Winner)**

[project link](#)

- Developed an IoT device, NurseAI, using sensors and AI to detect falls and provide 24/7 medical assistance. Integrated OpenAI's GPT for medical responses and Whisper for voice transcription. Deployed on Azure, the system provided real-time health monitoring with features like a panic button and medication reminders. Overcame hardware limitations to deliver a scalable and reliable AI solution.

### **HackSMU 2024 (Winner)**

[project link](#)

- Built an AI-powered tool to assist individuals with Alzheimer's and dementia by using the Method of Loci for memory enhancement. Integrated Natural Language Processing (NLP) to cluster user inputs and generate personalized visual memory prompts. Focused on enhancing memory retention and engagement through AI-generated imagery.

### **TreeHacks 2024 at Stanford University**

[project link](#)

- Built a health dashboard iPhone app using React Native, Terra API, and a custom machine learning model to monitor vital organ health. Implemented real-time biometric analysis with personalized health recommendations, deploying the app using Firebase for data storage and real-time syncing. Enabled proactive health monitoring through AI-driven insights.

## Education

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### **University of North Texas at Denton** – B.S. in Computer Science (expected 2024)

- Focused on advanced coursework in AI, machine learning, and software engineering.

### **Odessa National Polytechnic University** – B.S. in Computer Engineering (2015)

- First degree in computer engineering, with emphasis on system architecture and hardware-software integration.